JULY 9, 1951

NEWS ISSUE

Electrical World

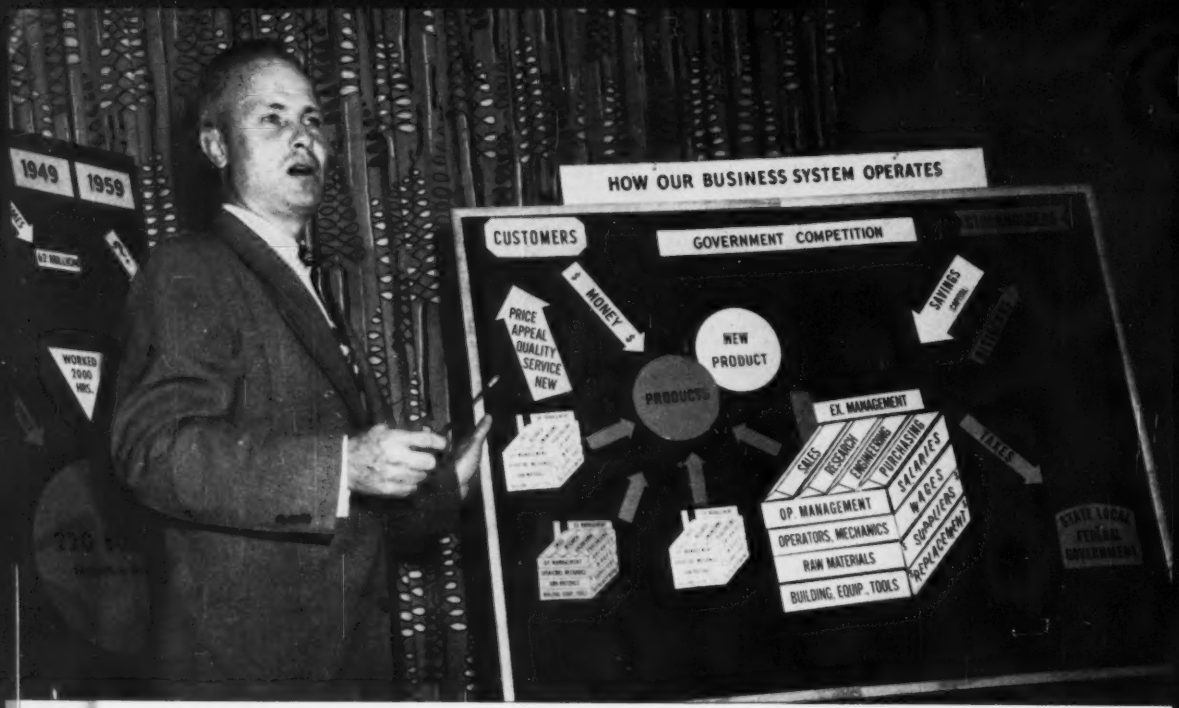
Price 35 Cents

A McGRAW-HILL PUBLICATION

Donald I. Bohn, Winner of 1950 Lamme Medal

The Wisconsin Works 35,000 Kw Harder ..... Page 16

Business, Post-Korea ..... Page 30



"WHO DECIDES, in the long run, what products will be made, how many, and what price they'll be sold for?" asks discussion leader J. C. Gibson. All but one in group agreed that it is the customer who decides.

RED HOT TOPIC at this "Hobso" session was comparison of individual rights under socialism and free enterprise. Draftsman M. L. MacKenzie points out limitations of right to own private property under English government—with emphasis.

"HOW CAN WE MAKE SURE changes in our system are for the better?" accountant Bob Thompson wants to know. Secretary Roberta Bingham suggested study of issues, exercise of voting franchise, interest in community activities.

WHAT MAKES AMERICA TICK?

Thanks to an idea called "Hobso" thousands of Americans are learning How Our Business System Operates

Most Americans are well aware that this country has the highest standard of living in the world. But they may not know just how and why our system of free enterprise makes this possible. "Hobso"—short for "How Our Business System Operates"—is designed to answer these questions, and to show why it is important that all of us have a basic understanding of our business system.

Based upon earlier development and use by the duPont Company, the General Electric presentation of the "Hobso" consists of three sessions, each lasting about 1½ hours. Employee participation ranges from mail boys to management, in G-E plants and offices from coast to coast.

Each group is relatively small in size to achieve maximum effectiveness, and is under the guidance of one of a large staff of well-trained discussion leaders. Questions and discussion are an important part of each session, and the informality of the meetings helps to stimulate further interest.

Many electric utilities, as well as other industrial firms, have also presented "Hobso." The enthusiasm for the course, both at General Electric and elsewhere, seems to support the fact that well-informed employees are also well-informed citizens. Your nearest G-E office will gladly supply you with additional information about "Hobso." General Electric Co., Schenectady 5, N.Y.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-169

The Electrical Week

INDUSTRY MOBILIZATION (pages 4 and 5)—Utility construction programs received a big boost when allocations of controlled materials were increased for the third quarter. Depa got nearly as much as it requested . . . Boron is being used by steel makers to reduce the amount of scarce alloy metals . . . Utilities are beginning to get certificates of necessity for accelerated tax amortization . . . Depa has asked utilities to use wood poles instead of steel towers wherever possible in order to conserve steel . . . NPA's Engine and Turbine Division has added three consultants . . . Under CMP, as in the past, utilities must make application for permission to start construction and for allotments of controlled materials . . . Joseph Mullally has been made deputy director of NPA's Copper Division . . . M orders are listed on Page 5.

WASHINGTON—Six REA officials killed in Colorado plane crash will be replaced from within the agency (p 13) . . . FPC examiner denies motion to dismiss application of Portland General Electric Co for a permit to build a dam on Deschutes River (p 13) . . . REA loans permit Colorado co-op to buy private company and South Carolina co-op to continue financing transmission lines from Santee-Cooper Dam (p 14).

ELSEWHERE—Los Angeles Department of Water & Power now supplies the city with 4 billion kwhr annually (p 11) . . . The prospects are still for high production and employment, despite talk of settlement in Korea (p 30).

• • •

Steel makers more than doubled their estimates of increased scrap needs this year—from a 3-million-ton jump over last year to a 6.5-million-ton increase. The revised estimate was based on current consumption. NPA reported some mills down to a two-day supply of scrap.

Announcement by RFC that stockpile requirements of tin have been greatly reduced doesn't mean more supplies for industry. It is another move in the government's price war against world tin producers. Tin has fallen from $1.83 to about $1.10 a lb since March 11 when the U. S. said prices were too high.

Kenneth P. Applegate has been elected president of Hartford Electric Light Co succeeding Austin D. Barney, who has been named chairman of the board. In other changes the company appointed William S. Barker general manager and John R. Donahue vice president.

General Electric Co last week appointed William V. O'Brien commercial vice president and manager of marketing in charge of the company's Apparatus Marketing Division. He replaces Chester H. Lang who recently was named vice president in charge of public relations. O'Brien's headquarters will be in Schenectady, N. Y.

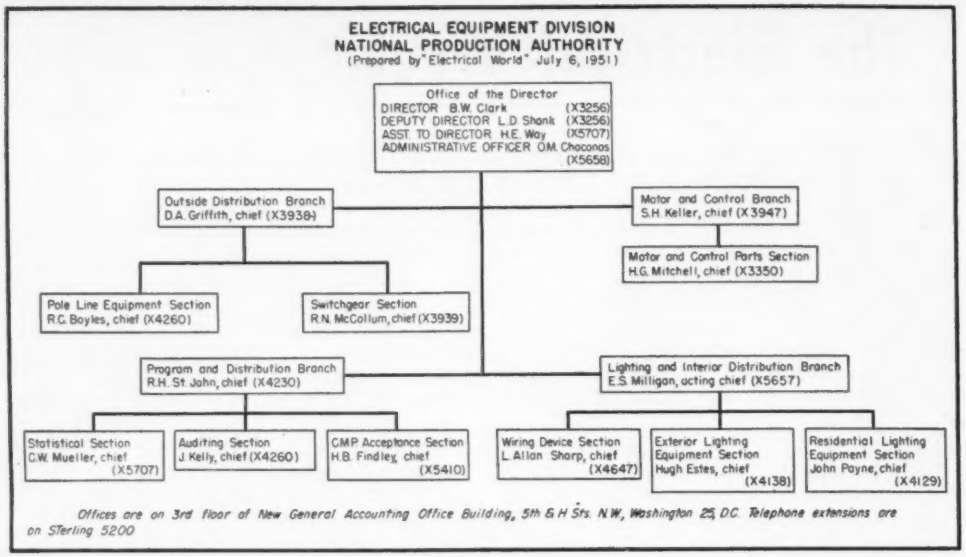
Further honors have come to Edmund W. Oesterreich, developer of pole-top resuscitation (EW, June 11, p 13). Duquesne Light Co, for which he is general superintendent of distribution, has named two scholarships for him. Duquesne and its parent, the Philadephia Co, have endowed the scholarships at Carnegie Institute of Technology. Only children of Duquesne Light Co employees are eligible for the awards.

Another swing to bi-monthly billing and meter reading may be coming, for the same reasons that sparked the shift during World War II—manpower conservation. Latest to return to the practice is Commonwealth Edison Co, Chicago, and Public Service Co of Northern Illinois. They have asked Illinois Commerce Commission to okay the move, effective in August. The sister companies estimate savings at over $1 million a year and figure customers may save $350,000 a year in checks and postage.

With 1951 half over production of bituminous coal is still running 13% plus above the corresponding period of 1950. But weekly output is running slightly below that of the second half of last year.

Notes From The News

Consumption of energy in the United States in 2000 A.D. will be equal to the current consumption of the world, G. W. Gleeson, dean of the School of Engineering and Industrial Arts, Oregon State College, predicted last week in Portland . . . Coils in the main generator of the power plant in Farmer City, Ill., were burned out during an electrical storm recently. Nothing unusual, though—the power plant has been struck by lightning three times and the generator burned out twice . . . Payment Puzzle: Within the last seven months, two unidentified persons have sent checks totalling $450 to Jersey Central Power & Light Co. Curt notes accompanying the letters said only that the "customers" felt they owed the company the money.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NATIONAL PRODUCTION AUTHORITY
(Prepared by "Electrical World" July 6, 1951)
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DEPUTY DIRECTOR L.D Shonk (X3256)
ASST. TO DIRECTOR H.E. Way (X5707)
ADMINISTRATIVE OFFICER O.M. Chaconas (X5656)
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L. Allan Sharp, chief (X4647)
Exterior Lighting Equipment Section
Hugh Estes, chief (X4138)
Residential Lighting Equipment Section
John Payne, chief (X4129)
Offices are on 3rd floor of New General Accounting Office Building, 5th & H Sts. N.W., Washington 25, D.C. Telephone extensions are on STerling 5200

Higher 3rd Q Material Allocations Will Aid Construction by Utilities

Increased third-quarter material allocations for electric utility expansion have brightened the materials picture. While actual allocations were still not equal to original requests, the increases will help in strategic spots.

Defense Electric Power Administration, which hands out available allocations for construction, considered the increases little more than a step in the right direction. The Engine and Turbine Division of the National Production Authority reported that manufacturers should now be able to maintain their first quarter operating levels. Increases for NPA's Electric Equipment Division had not been announced but were expected soon.

For Depa the increases shaped up like this:

Aluminum—13 million lb additional for a total of 38 million lb for the third quarter. Depa had requested 47.5 million lb.

Copper—2 million lb additional for a total of 77 million lb. Request had been for 80.7 million lb.

Steel—30,000 tons additional for a total 300,000 tons. Request had been for 337,000 tons.

While increased allotments for engines and turbines have been approved, NPA was not able to give a breakdown as to the materials which would go to electrical equipment. Charles Kells, ETD director, indicated it would be sufficient to keep pace with the new electric equipment, such as transformers and pole-line hardware, and switchgear, which can be turned out under the materials program governing that segment of the industry.

Part of the credit for the allocation increases goes to an aroused Electric Utility Defense Advisory Council which took on the job of selling its case to the mobilization agencies. After a meeting in June a committee of ten, headed by Walker Cisler, Detroit Edison Co, put the utilities' case before Defense Moiblizer Charles E. Wilson.

There was no official report on the conference, but the allocations were increased a few days later.

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Boron Aids Steel Makers

Boron is being used by steel manufacturers to reduce the amount of scarce alloy metals, the National Production Authority reports.

Accelerated Amortization Approved for 8 Utilities

For the first time, electric utility companies last week were listed among the defense facilities which have been issued certificates of necessity for accelerated tax amortization.

In an announcement made by the Defense Production Administration June 18, eight electric utilities were listed as receiving 29 certificates. This was said to represent about one-half the applications already approved, but not made public.

These certificates permit companies to depreciate for tax purposes a designated percentage of the cost of a new facility over a five-year period.

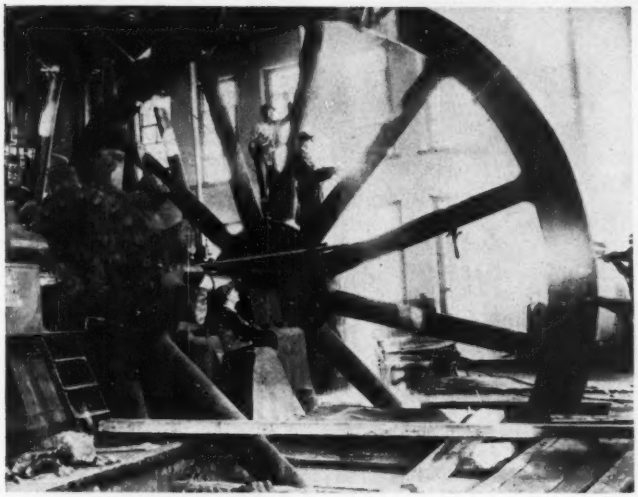
Companies awarded certificates, amount of costs covered, and percentage of depreciation allowed are:

Mississippi Power Co, $461,007 at 25%; Alabama Power Co, $24,153 at 65%; Pacific Power & Light Co, $26,170,000 at 75%.

The Detroit Edison Co, four plants, $39,040,600 at 45%; $20,448,550 at 65%; $18,867,450 at 65%; and $42,798,750 at 25%.

Virginia Electric and Power Co, six plants, $2,650,000 at 25%; $2,000,000 at 25%; $9,200,000 at 25%; $2,955,000 at 25%; $13,600,000 at 55%; and $2,200,000 at 55%.

Georgia Power Co, three plants, $1,460,000 at 25%; $1,316,291 at 25%; and $630,544 at 25%.



OLD WHEEL being dismantled for shipment as scrap to steel mill will eventually increase the amount of steel available for power equipment and other needs of the defense program. NPA-DPA Administrator Manly Fleischmann has urged all industries to search plants for obsolete and broken machinery, tools, and other equipment and turn scrap over to mills and foundries to help ease shortage

Depa Asks Wood Poles Be Used to Save Steel

In an effort to give an added stretch to steel allocations to the electric power industry, the Defense Electric Power Administration has suggested the use of wood poles and structures wherever possible.

Companies having on file with Depa construction projects requiring steel, for which such substitutions can be made, were requested to file amendments noting the reduction of steel required. When filing new projects, companies were urged to consider substitution of wood for steel.

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Consultants Added to ETD

Three consultants have joined the staff of the National Production Authority's Engine and Turbine Division. George M. Gillen, Lukens Steel Co, Coatesville, Pa., is serving in the division's Boiler and Pressure Vessels Section. Edward Wilcox, Foster Wheeler Corp, is helping ETD's new Heat Exchangers and Water Treatment Section. William B. Lee, Allis-Chalmers Manufacturing Co, is in the Condenser Section.

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Industry M Orders

The following M order amendments of interest to the electrical industry have been issued by the National Production Authority. Orders not of interest have been omitted. Copies may be secured from the National Production Authority, Washington 25, D. C., or any regional office of the Department of Commerce.

Amendments to Previous Orders

Amendment to M-14 continues **nickel** conservation order for the third quarter 1951 pending proposed overall revision of original regulation.

Applications Continued on Allotments, Building

Under CMP, as in the past, utilities must make applications for permission to commence construction and for allotments of controlled materials. Depending on the type of materials, applications are to be sent to Defense Electric Power Administration or National Production Authority.

Depa has jurisdiction over facilities for the generation, transmission, and distribution of electric power. This includes line construction but in the field of non-line construction is generally limited to substations and generating plants. Any non-line construction or generating plant would also come within Depa's jurisdiction.

All other construction, that of a general nature, falls within the jurisdiction of NPA. Warehouses not an integral part of generating plants or substations are under NPA. Except under very unusual circumstances, all garages, office buildings, administrative buildings, retail stores, and retail outlets would be under NPA.

Applications to Depa are to be filed in the manner prescribed in order M-50. For the present, applications addressed to NPA are to be made on form NPA F-24, although this form may later be replaced by form CMP-4C. NPA applications should be sent to the nearest department field office.

For companies which have filed forms DPA-2, DPA-3, and DEPA-3S for projects now falling within the jurisdiction of NPA must refile them under order M-4, since Depa is not the appropriate agency for such projects. Reference should be made to the Depa application when filing with NPA.

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NPA Promotes Mullally

Joseph W. Mullally, on leave from Anaconda Wire & Cable Co, has been promoted from commodity industry advisor in the National Production Authority Copper Division to deputy director of the division.

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A. W. HIGGINS, right, retired in 1950 after 13 years as president of Florida Power Corp. To commemorate his service, the utility named its newest plant after him. He is shown with W. C. Gilman, present president, at recent ceremony

FIRST UNIT of Higgins Plant near Oldsmar, Fla., went on the line recently with 45,000 kw. Two additional units will be completed in 1953, making it largest of its kind in the state. Florida Power system now has a capacity of 245,000 kw

San Juan Islands Loop Completed by 2 Cables

Two more cables have been laid in the San Juan Island group, completing the loop begun April 16 when the Bonneville power cable was laid in two lengths from the mainland to Decatur Island and between Decatur and Lopez Island (EW, April 30, p 13).

The latest cables, each more than 5,000 ft long, were laid from Orcas and Shaw Islands and between Shaw and Lopez. The job was done by Northwest Engineering Electric Co, Seattle.

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Lighting Confab Slated

NEMA's Industrial and Commercial Lighting Equipment Section will hold the fourth International Lighting Exposition and Conference at Cleveland, May 6-9, next year.

California's Kings River Program Is Approved

A bill creating the Kings River Conservation District, embracing the Kings River water service area of about 1.2 million acres in Fresno, Tulare, and Kings Counties, Calif., has been signed into law by California's Gov Earl Warren.

Chief sponsor of the legislation was the Kings River Water Users Association, which at the present time is negotiating with the Bureau of Reclamation for a contract governing the charge and use of water made available by the construction of the Pine Flat Dam.

Combines 31 Districts

The bill would combine into the one conservation district a total of 31 irrigation districts, mutual water companies, water storage, and reclamation districts.

The conservation district would have broad powers to furnish water and electrical energy. It would have the authority to issue general obligation or revenue bonds by a two-thirds vote of the people residing in the district.

The bill also would give the district the power of eminent domain and would authorize it to cooperate and contract with the federal government, the state government, and other public agencies.

Its main purpose is to create a single organization to represent the whole Kings River water service area in dealing with the Bureau of Reclamation for Pine Flat Dam water, scheduled to be available in 1954 or 1955.

Bill Effective Sept. 23

When the bill becomes effective Sept. 23, the governor will be authorized to appoint the first board of directors. This board then will call a special election to submit to the voters of the areas involved the question of whether the district shall be ratified. If not, the district would be dissolved. If approved, steps will be taken to elect a board of directors, to serve for staggered four-year terms, consisting of seven members, one each elected from six districts within the major district and one to be elected at large from the newly created district.

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AS LEADS for generators, transformers, motor and oil switches . . . for general distribution of heavy power loads in manufacturing and industrial plants, your top specification is Roebling Varnished Cambric Cable. . . . Roebling V.C. is made in single conductor sizes from 2,000,000 C.M. to #14 A.W.G.; in multiple conductor sizes from 750,000 C.M. to #14 A.W.G. It is recommended for use up to 17,000v between phases in single or multiple conductor construction; and to 26,000v for single conductor grounded neutral.

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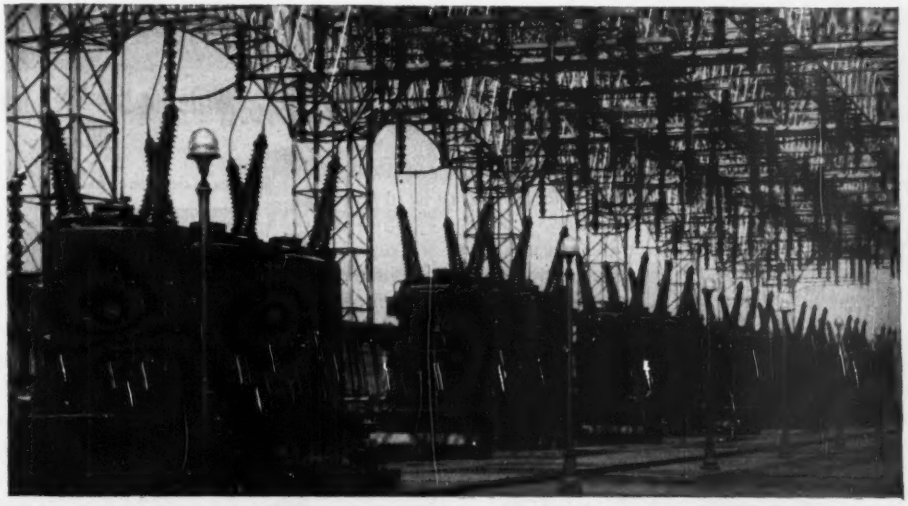

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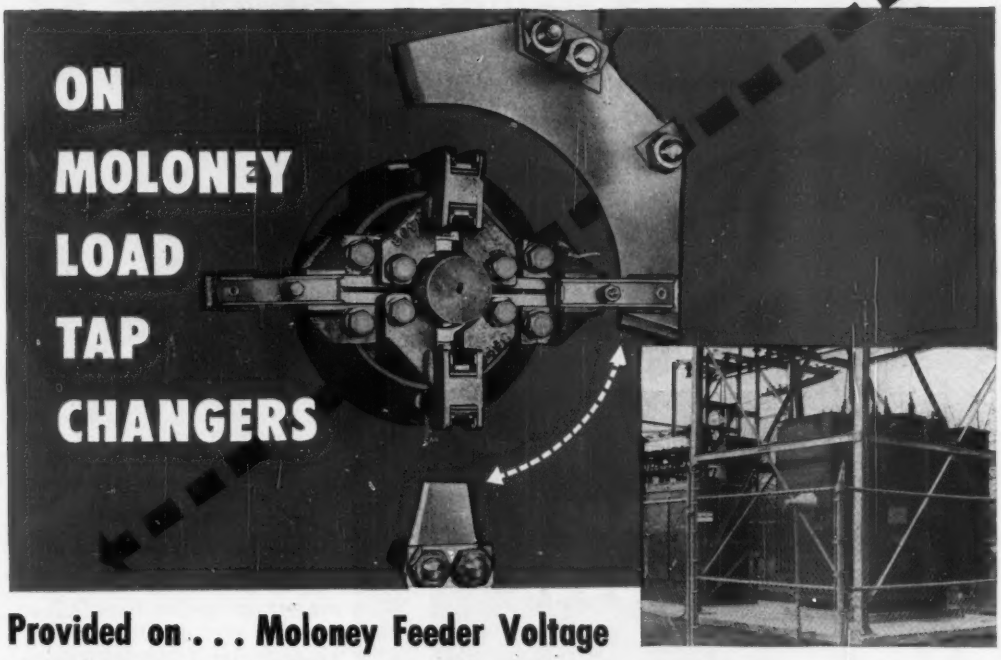

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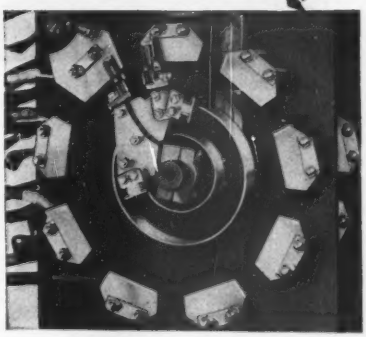
Load Tap Changers, provided on all Moloney Feeder Voltage Regulators, Regulating Transformers and Load Ratio Control Transformers, feature a Load Transfer Switch which relieves the Tap Selector Switch of all arcing duties and results in greatly increased arc interrupting capacity.

Use of the separate Load Transfer Switch permits longer arc clearances to be maintained since arcing duty is confined to but two stationary contacts per phase. This is in contrast to the nine stationary contacts per phase which are subject to arcing on regulators which require the Tap Selector Switch to break the load current.

This feature of the Moloney Load Tap Changer, along with the use of by-pass switching reactors, permits tap changing on a larger Kva load without increasing the physical size of the Load Tap Changing equipment. Maintenance costs are also reduced since arcing is eliminated from the Tap Selector Switch.

MEB1-14

NO ARCING HERE...



No arcing duty is imposed upon any of the tap selector switch contacts, avoiding the necessity for replacement due to burning or scoring. Contacts are of hardened *copper alloy* to minimize frictional wear.

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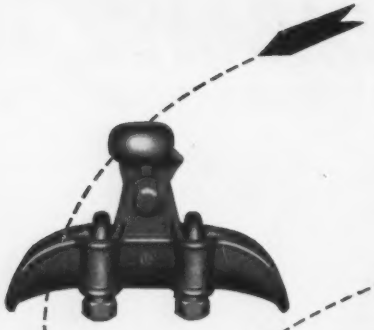
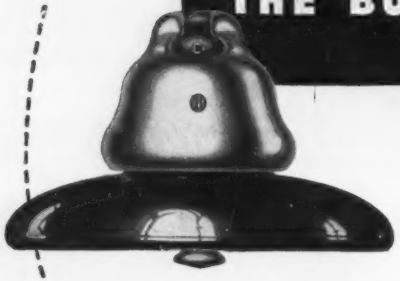


LET'S NOT PASS THE BUCK !



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Put the total responsibility for holding your conductors where it belongs -- in the hands of the only men who deal with the total problem. Build with O-B insulators *and* hardware.

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LA Now Gets 4 Billion Kwhr a Year

That's the Record Set Recently by the City's Department of Water & Power—The World's Largest Municipally Operated Power System

The world's largest municipally owned power system—Los Angeles Department of Water & Power—was born with a $3.5 million bond issue in 1910, distributed its first power in 1916, and surpassed the four billion kwhr mark for a 12-month period in April of this year.

That the City of Los Angeles is in the power business at all rests on the fact that it was first concerned with bringing water to the semi-arid coastal plain, which continues to attract new residents and thus presents a continuing expansion problem.

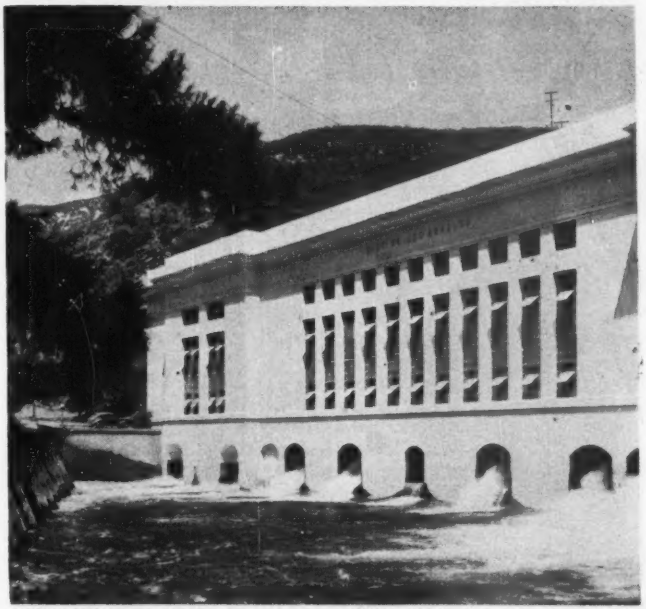
City Built Aqueduct

To get the water, the city reached out 238 miles with an aqueduct to Owens River Valley, north of Los Angeles and east of the snow-laden Sierra Nevada range. Designing an aqueduct to cross several mountainous areas presented the Department of Water & Power with several sites for generating hydroelectric energy. The city received its first water from the aqueduct in 1913, and Power Plant No. 1 went into operation in San Francisquito Canyon in 1917. It then furnished 36,000 kw, and its present capacity is 60,000 kw. Prior to operation of this plant, the city distributed power purchased from nearby Pasadena's municipally owned facilities.

Gets Power from Hoover Dam

Today, the department is one of two agencies operating generators at the Hoover Dam power plant. Six of the units, on the Nevada side, furnish Los Angeles with 71% of its power needs. It operates two steam plants—Seal Beach and Harbor—for another 15% of its power and five aqueduct hydro plants for 10%.

Additional generating facilities either under construction or in the planning stage include the hydroelectric project on the Owens River Gorge near Bishop, which will furnish 112,500 kw from three identical power plants, and the new San Fernando Valley steam plant with an ultimate capacity of 320,000 kw.



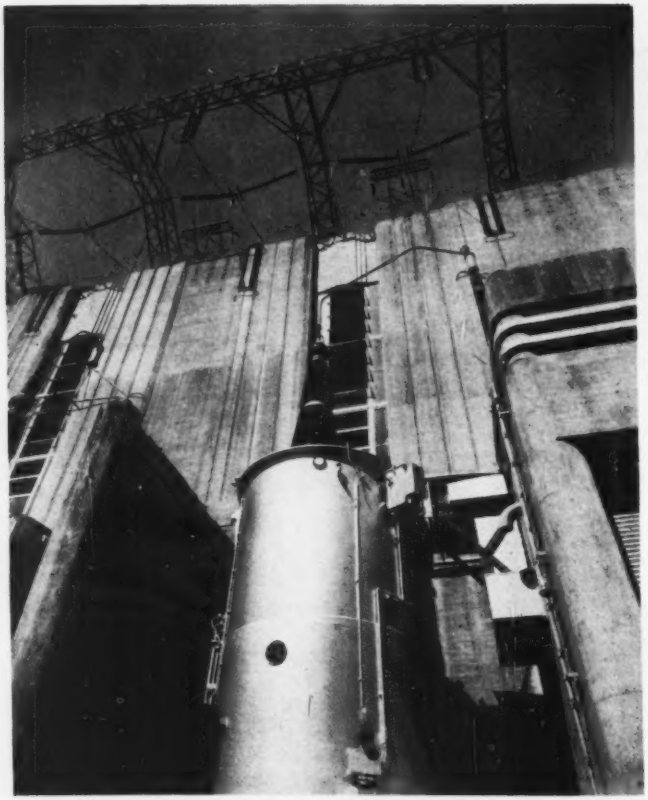
CITY BEGAN generation of its own power in 1917 with Plant No. 1 in San Francisquito Canyon, shown above. The 58,000-kw hydro plant uses water from aqueduct

Policy decisions come from the city's Board of Water & Power Commissioners. This is composed of five local businessmen and civic leaders appointed for five-year terms by the mayor and confirmed by City Council. Duncan Shaw, in private life vice president of a large corporation, is president of the board.

Samuel B. Morris heads the department as general manager and chief engineer. He came to the department in 1944 following a career that included a nine-year stint as professor and department head of civil engineering at Stanford University. Prior to that, he designed and supervised construction of Morris Dam, 328 ft high, in San Gabriel Canyon for the City of Pasadena. Completed in 1934, the project was named in his honor.

In addition to an intensive program to promote use of electricity, the department carries on some advanced public relations by promoting recreational use of its Long Valley Dam and Crowley Lake installations in the Inyo-Mono country east of the High Sierra. Many a Los Angeles fisherman has carried back his limit of Rainbow or Loch Leven trout from Crowley Lake and others that serve as sources of water supply and power generation for the city.

Although the department today supplies power to all residents and industries within the city's boundaries, it started operations with two private power companies sharing the territory —Los Angeles Gas & Electric Corp and Southern California Edison Co. In 1922 Los Angeles purchased the Edison company's distribution properties within the city limits, adding 117,000 meters to the 19,500 it had



LOS ANGELES operates six generating units on Nevada side of Hoover Dam Power Plant. Operation produces 410,000 kw for system, 71% of city's requirements

on its lines. The city wound up acquisition of Los Angeles Gas & Electric Corp in 1937, gaining another 193,000 meters.

Only other area served by the municipal department is the Owens River Valley. However, the department is interconnected with the Edison Company and California Electric Power Co systems, and the municipal departments of Pasadena, Glendale, and Burbank. The three city-owned power systems receive 35,000 kw of Hoover Dam energy generated there by the Los Angeles department and transmitted over the municipally constructed and operated Boulder transmission lines. Connection with the other two utilities serving southern California allows exchange of power as needed.

Although the population surge in the Los Angeles area has become a well-known phenomenon, it has not been the only factor increasing the power load in that territory. Comparison of population increase for the ten-year period of 1940-41 to 1949-50 and the increase in kwhr sales to ultimate users for the same period is as follows: Population up 27.64% to 1,957,692; kwhr up 99% to 3,238,000,000.

Other power production figures for the ten-year period show a remarkable growth of the Department of Water & Power: Gross energy generated, purchased, interchanged, and received up 84% to 4,590,000,000 kwh; Hoover Dam energy production up 53% to 3,256,000,000 kwhr; aqueduct hydro plants, including Owens Valley up 104% to 472,000,000 kwhr; steam plant production up 1,320% to 696,000,000 kwhr.

Financially, the department is operated as an independent unit of the city, with current operations paid for out of revenues from the sale of water and power. Funds for expansion are provided in part from revenues and in part from sale of revenue bonds.

During fiscal year 1949-50, gross income of the power system was $53,831,807, a gain of $211,564 over the preceding year. Net income totaled $14,970,068, after providing for interest on funded debt and depreciation of plant and equipment. From the net, the city received the $2,516,000 for its reserve fund. The remainder was invested in the system for retirement of power bonds and to help pay for power construction work.

Equity Is $175,620,305

The power system at present shows a total funded debt of $135,542,978, depreciation reserve of $77,603,081 and miscellaneous liabilities of $10,940,038, leaving the city with an equity of $175,620,305.

Since the war the department has completed its Harbor steam plant, first project of this type to be constructed by the city. The first 65,000-kw turbine generator went into service in 1943, when war conditions prevented completion of the project. The fifth and final generator was installed in 1949, bringing the plant's capacity to 355,000 kw. Two of the generators have a continuous rated capacity of 65,000 kw, and the remaining three carry 75,000-kw ratings. This plant is situated near Los Angeles Harbor, which furnishes condenser cooling water.

May Need More Steam Plants

When the Gorge Project is completed, the Los Angeles department will be forced to look toward the Colorado River or more steam plants for additional power needs.

Southern California's controversy with Arizona over the use of Colorado River water is well known. Power officials in the coastal area feel they have no where else to turn for suitable hydro generation. The Colorado is the last large source of hydro for the area. The coastal area, a semi-arid region, does not have the large rivers necessary for expansion of such development. Most of its rivers flow underground, which is all right when they are used as sources of water supply, but not so practical when they are used for generation of electricity.

AMONG REA OFFICIALS killed in Colorado air crash were, left to right, George W. Haggard, deputy administrator; I. Thomas McKillop, chief of the Management Division; and Arthur W. Gerth, chief of the Applications and Loan Division

6 REA Employees Killed in Crash to Be Replaced from Within Agency

Vacancies in the Rural Electrification Administration caused by the death of six employees in an air crash will be filled from within the organization if possible, William C. Wise, acting REA administrator, said last week.

George W. Haggard, deputy administrator, and five others were among 50 persons killed in the crash, which occurred June 30 in Rocky Mountain National Park, Colo.

The REA employees were returning from the annual conference of the administration's western staff at Salt Lake City when the United Airlines DC-6 in which they were riding ploughed into Crystal Mountain.

The other five were Arthur W. Gerth, chief of the Applications and Loans Division; I. Thomas McKillop, chief of the Management Division; Stuart E. McCabe, in charge of telephone loans in the Texas-Arizona-New Mexico area; Thomas L. Evans, field engineer in that area; and Robert E. Beeghly, field representative for the Rural Telephone Program.

Wise said plans to promote replacements from within REA was the usual policy, but he called Haggard, McKillop, and Gerth "utterly irreplaceable."

"We hope our organization has enough resiliency to snap back," Wise said, "but things will move slowly for a while."

Haggard formerly was general manager of the REA-financed Texas Power Reserve Electric Cooperative, Inc, at Austin and former executive secretary of Texas Farm Bureau Federation. He joined REA in January, 1948, and became deputy administrator in November, 1949.

Gerth was born in Wyaconda, Mo., in 1906. He entered government service in 1933 on the White House administrative staff doing statistical work. Joining REA in September, 1937, he became assistant chief of Applications and Loans Division in May, 1942, and chief in March, 1943.

McKillop was born in Scotland in 1913 and was naturalized in 1927. He joined REA in March, 1946, as industrial engineer and management specialist and became chief of the division in February, 1949.

Position Seems Jinxed

The position of REA deputy director seems to be jinxed. Haggard is the third successive holder of the post to die suddenly in office. The first was Vincent J. Nicholson, who died from a heart attack in St. Louis in November, 1945. Second was William J. Neal, who died in an automobile accident in New Mexico in October, 1949. The third was Haggard.

•

Offers Atomic Raid Booklet

"How to Prepare Your Plant for Atomic Attack," a booklet designed for use in industrial plants, has been offered by Walter Kidde & Co, Inc. It may be had without cost by writing to the company at Dept A, 675 Main St., Belleville 9, N. J.

FPC Denies Dismissal of Deschutes Dam Case

After a two-week hearing at Portland, Ore., by the Federal Power Commission on the application of Portland General Electric Co for a permit to build a dam on the Deschutes River in Oregon, FPC Examiner William J. Costello denied a motion made by the Oregon State Fish Commission to dismiss the application.

The motion for dismissal was made on the grounds that FPC lacked jurisdiction in the case because no federal lands were involved, the Deschutes was not a navigable stream, and that power from the dam would not be in interstate commerce. In denying the motion, Examiner Costello pointed out that his decision was not the final authority. The FPC in Washington, he said, would make final rulings on all motions entered in the case.

Because many of the issues involved in the Pelton Project and the Tacoma Light & Power Co's proposed Cowlitz River Dam Project in southwestern Washington are basically the same, Costello indicated that the FPC may decide both cases at the same time. Both projects are opposed by fishing interests on grounds that they would interfere with salmon runs.

Any FPC ruling favoring the Pelton Project would not necessarily mean that the $22-million dam would be built, because the Oregon fish commission has twice rejected the project, and, in the opinion of some legal authorities, still could block it.

•

Rose Will Take Over Interior Duties Shortly

Robert R. Rose, Jr., of Casper, Wyo., will take over the duties as Assistant Secretary of Interior early this month following his resignation as Mayor of Casper. He was sworn in June 28, but returned to his home to complete private business.

A former member of the Wyoming legislature, Rose is a graduate of the University of Wyoming Law School and has practiced law in Casper. He served in the Army Air Corps during World War II, later volunteering for duty in the Office of Strategic Services.

As successor to C. Girard Davidson, Rose will supervise activities of the Bureau of Mines and the geological survey.

AIEE PRESIDENT-ELECT Fred O. McMillan received badge of office from Titus G. LeClair, retiring president, at Institute's summer general meeting in Toronto

REA Loan Allows Co-op to Buy Private Company

A loan which would permit a Colorado rural electric cooperative to buy an electric power company was approved last week by the Rural Electrification Administration.

The government agency also added another $1,404,500 to the $7,595,000 loan already made to a South Carolina transmission cooperative to continue financing its 806 miles of transmission network.

With a $2.9 million loan from REA, the Yampa Valley Electric Association, Inc. of Steamboat Springs, Colo., plans to acquire and rehabilitate the electric facilities owned by Colorado Utilities Corp of Steamboat Springs and to make system improvements. Nearly half the loan will be used for the plant acquisition, and the remainder for construction of distribution lines and headquarters.

The additional loan to the Central Electric Power Cooperative of Columbia, S. C. will be used to finance construction of approximately 121 miles of transmission line, of which some 55 miles are 115 kv and the remainder 69 kv, with added switching facilities. This, said REA, would permit completion of the proposed 806 miles of line.

At the present time, approximately 350 miles are under contract or under construction. The system is to be used to transmit power from the Santee-Cooper Dam, which is owned by the State of South Carolina and operated by the State Public Service Authority. The authority will lease, operate and maintain the system after it is built by the cooperative. After the loan is amortized, the facilities will become the property of the authority.

•

Claude L. Draper Begins His Sixth Term on FPC

Claude L. Draper, dean of the Federal Power Commission, was sworn in for his sixth term on the commission June 22, having served under three presidents.

Draper was first appointed by President Hoover in 1930, and later reappointed by Presidents Roosevelt and Truman. He has twice served as vice-chairman. Born in Cheyenne, Wyo., Draper was active in public life in that state before coming to Washington.

•

Named to Maryland PSC

Wilmer Fell Davis has been named to the Maryland Public Service Commission by Governor Theodore R. McKeldin. Davis, a former state senator from Federalburg, succeeds Olin Higgens of Cambridge.

Erdahl of Tacoma Light Criticized on Spending

C. A. Erdahl, public utilities commissioner at Tacoma, Wash., has been sharply criticized for awarding a $15,000 City Light excavation contract without calling for bids or securing City Council approval, as required under the city charter.

The bills submitted for payment on the excavation always were under $1,500, the limit prescribed by law under which contracts can be let without a formal bid call. The city charter prohibits "splitting" bids to keep them under the $1,500 limit and even provides dismissal for any official so doing.

Mayor John H. Anderson ordered the project stopped at one time but let it proceed when he was informed the job virtually was completed.

Erdahl declared that he had obtained "competitive prices" on the project and that "the city has obtained a very satisfactory job at minimum cost." He maintained that the spirit of the law was fulfilled, declared that it would be impossible to operate a city corporation as large as City Light under strict adherence to a charter framed in 1927.

Mayor Anderson ordered Erdahl to "personally investigate and discontinue this and any repetition of any instance of like nature." He appears to be the leader in criticism of Erdahl's spending practices. Discrediting Erdahl, strong politically, would react in Anderson's favor, who appears to have political ambitions.

•

Ohio PUC Reorganized; 2 New Members Named

Ohio Public Utilities Commission has been reorganized and two commissioners have been added. Robert Moulton, former state commerce director, and Ralph Winter were appointed to the commission by Gov Frank J. Lausche and were confirmed by the Ohio Senate.

Winter resigned as state senator to take the new post. He replaces Harry Miller, who resigned to become a vice president of Columbus & Southern Ohio Electric Co. Moulton replaces former commission chairman Harold L. Mason, whose term expired. Ray Martin is the only holdover on the commission.

HERE'S L-M's OUTSTANDING

new sidewall bushing

FOR DISTRIBUTION TRANSFORMERS

← *better*
← *faster*
← *safer*

HOW IT'S DESIGNED

Heavy machined wet-process porcelain (1) with ample leakage distance. Extra strong finger-grip handle (2) will not come off accidentally, but can be removed for inspection. Heavy connector (3) machined of solid metal; conductor hole opens on one side of bushing only —conductor cannot go through to cause accidental contact; connector and hole will accommodate up to two full-size conductors. Leak-proofdesigninherently siphon-proof.

here's why L-M's new sidewall bushing is *better*—better for the transformer and the user because it permits lower, lighter transformers requiring less pole space . . . better because it makes a firmer, more permanent connection . . . better because of its extra strong, heavy design.

IT'S FASTER, because the lineman can make transformer connections more quickly. He inserts the bared end of the conductor into the hole in the bushing, and spins the finger-grip knob tight. That puts a permanent, firm, squeeze on the conductor, assuring a good electrical connection that cannot pull out. Connector will take full range of EEI-NEMA-prescribed conductor sizes.

IT'S SAFER, because there are no exposed live parts, no sharp edges or projections to catch gloves or snag clothing. This new bushing is now standard on all L-M transformers up to 5000 volts. For complete information on L-M transformers and the new bushing, ask the L-M Field Engineer, or write Line Material Company, Transformer Division, Zanesville, Ohio (a McGraw Electric Company Division).

LINE MATERIAL—*Transformers*

Complete Coordinated Equipment for Distribution Today

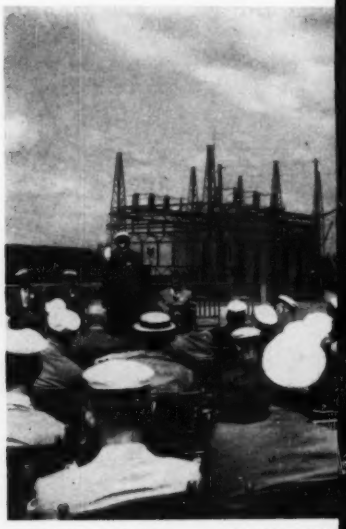
48-R

SEN WILEY (l) and group inspect Wisconsin Basin Model

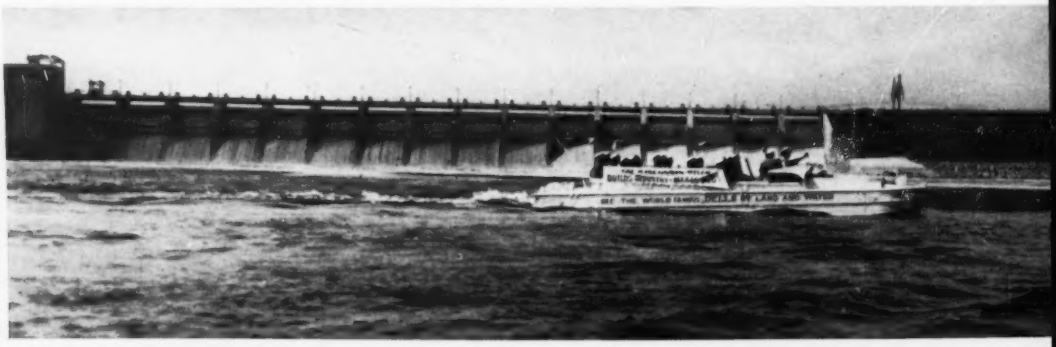
PARTY landed at Camp Douglas on the way to Petenwell

CONTROL R

WISCONSIN utility executive and senator unveiled plaque to be mounted in plant



SENATOR told the group the Wisconsin's



AMPHIBIOUS 'DUCKS' took 150 in party down river from Petenwell to Castle Rock Dam. Here one of the four craft

OM tour preceded dedication at project

ire hydro system was privately financed

sses headgates of upstream project

ON PETENWELL DAM during inspection trip, group watched water flow through flood gates

'The Hardest Working River' Works 35,000 Kw Harder

THE Wisconsin—dubbed "The Hardest Working River" by power men of the area—today is working a couple of dams harder. Petenwell and Castle Rock Projects of Wisconsin River Power Co, dedicated recently, brought the number of hydro dams along its 300-mile course to 26. Petenwell, 170 miles above the mouth, added 20,000 kw, and Castle Rock, 14 miles downstream, 15,000 to the river's total output.

Dedication of the dams began in the Mechanical Engineering Building of the University of Wisconsin. There Wisconsin Senator Alexander Wiley, congressmen, and utility executives looked over a replica of the Wisconsin River Basin. Then they took off in a chartered plane and inspected the projects from the air. Landing at Camp Douglas, they rode to Petenwell in buses for the ceremony.

Senator Wiley pointed out that harnessing the Wisconsin had been accomplished entirely by private capital. "It is a source of tremendous pride to us that the builders of these projects have paid their own way. They have developed them through the miracle of the American free enterprise system."

Wisconsin Power & Light Co's public relations department came up with a song, "The Nation's Hardest Working River," sung by the state's championship barber shop quartet. An official Wisconsin River Flag was presented to C. E. Kohlhepp, president of Wisconsin Public Service Corp. The two utilities and Wisconsin Power & Paper Co own Wisconsin River Power.

After the dedication, the group climbed aboard four amphibious "ducks" and cruised down the river to look at the Castle Rock Project.

Here is the world's most faulted power system!

This system begins and ends inside our High Power Laboratory. It owns only a few hundred feet of conductors, yet it has been faulted almost 250,000 times—deliberately!

It gets this purposeful punishment because it was erected specifically to serve *you* . . .

For into this miniature system of ours we connect every new interrupting device design. Here they are repeatedly subjected to all fault currents they might be expected to interrupt in actual service. And out of this testing comes the valuable data that enable us to prove . . . and to constantly improve . . . the equipment we build for you.

The testing of high-power circuit breakers provides a good example. The data gained from thousands of actual faults—proving ratings as high as 10,000,000 kva for 230,000 volts—have enabled us to reduce interrupting time, and the size of equipment to do the job. For *you* this means greater system stability and better service continuity. Most important, it means . . . you can always be *sure* when you specify Westinghouse.

High Power Laboratory Developments

"De-ion®" Grid Interrupters
10,000,000-kva Interrupting Capacity
3 and 5 Cycle Interrupting Time
Reclosing Times as Low as 15 Cycles
Longer Contact Life
Smaller Tanks—Less Oil

SEE "ELECTRICAL PROVING GROUND". The complete story of 25 years of High-Power Laboratory testing is available to you in sound and color motion picture. Here is an absorbing record of electrical progress . . . dramatic evidence of the way Westinghouse proves for you. For a showing to your group, simply contact your Westinghouse representative or write Westinghouse Electric Corporation, Film Division, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-60749

YOU CAN BE SURE.. IF IT'S
Westinghouse
CIRCUIT BREAKERS
WITH "DE-ION" GRIDS

Energy Sales in February 16.9% Over Year Before

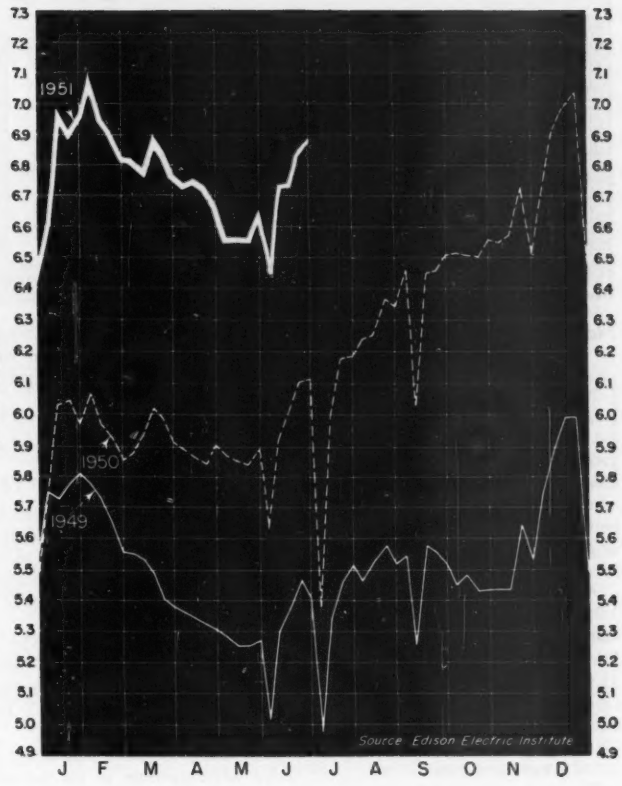
Sales of electrical energy in February exceeded those for the same month a year ago by 16.9%.

Electric utilities sold 25,966,117,000 kwhr to utlimate customers in February of this year compared with 22,203,216,000 kwhr in February, 1950. Revenue from ultimate customers totaled $467,200,400, or 12.3% more than the $416,129,500 received in February last year.

Average usage per residential or domestic customer reached 1,865 kwhr in the 12 months ended Feb. 28, 1951. This represents a rise of 8.9% over the average usage of 1,713 kwhr for the same period a year before. The average annual bill amounted to $53.34, up 6.3% from $50.19 for the twelve months ended Feb. 28, 1950.

Classification of Sales, February

Kilowatthour Sales February	Million Kwhr 1951	Per Cent 1950	Change
Residential or domestic	6,974	6,017	+15.9
Rural (distinct rural rates)	476	405	+17.5
Commercial or industrial			
Small light and power	4,652	4,076	+14.1
Large light and power	12,351	10,297	+20.0
Street and highway lighting	282	251	+12.4
Other public authorities	659	597	+10.3
Railways and railroads			
Street and interurban railways	324	304	+ 6.6
Electrified steam railroads	207	203	+ 1.8
Interdepartmental	42	52	—20.2
Total to ultimate customers	25,966	22,203	+16.9



Output Week Ended June 30—6,897,800,000 Kwhr

Weekly Output, Millions Kwhr

1951	1950	1949
June 30 6,898	July 1 6,115	July 2 5,410
June 23 6,835	June 24 6,102	June 25 5,466
June 16 6,747	June 17 6,012	June 18 5,373
June 9 6,734	June 10 5,921	June 11 5,300
June 2 6,445	June 3 5,632	June 4 5,018
May 26 6,653	May 27 5,894	May 28 5,270
May 19 6,559	May 20 5,845	May 21 5,255
May 12 6,567	May 13 5,864	May 14 5,527
May 5 6,560	May 6 5,868	May 7 5,284
Apr 28 6,674	Apr 29 5,902	Apr 30 5,204

Percent Change from Previous Year

	June 30	June 23	June 16
New England	+ 9.4	+10.4	+12.7
Mid-Atlantic	+12.6	+11.2	+11.5
Central Industrial	+11.5	+10.3	+ 9.7
West Central	+ 9.8	+ 9.3	+ 8.1
Southeast	+13.2	+11.5	+14.0
South Central	+19.0	+16.6	+14.3
Rocky Mountain	+12.5	+14.9	+15.9
Pacific Coast	+13.9	+14.9	+15.1
Total United States	+12.8	+12.0	+12.2

MEETINGS

Electric Companies Advertising Program
Management Group Meeting, The Blackstone Hotel, Chicago, July 11.

American Institute of Electrical Engineers
Pacific General Meeting, Multnomah Hotel, Portland, Ore., August 20-23; Fall General Meeting, Hotel Cleveland, Cleveland, Ohio, October 22-26.

Pacific Electronic Exhibit
Civic Auditorium, San Francisco, August 22-24.

Illuminating Engineering Society
National Technical Conference, Hotel Shoreham, Washington, D. C., August 27-30.

Northern California Electrical Bureau
Annual Exposition, Civic Auditorium, San Francisco, September 1-9.

Rocky Mountain Electrical League
Fall Convention, La Fonda Hotel, Santa Fe, N. M., September 9-12.

★**International Association of Electrical Inspectors**
Southwestern Section, Hotel Lafayette, Long Beach, Calif., September 13-15; Northwestern Section, Hotel Davenport, Spokane, Wash., September 19-21; Western Section, Hotel Fontenelle, Omaha, Neb., September 25-27; Eastern Section, Chalfonte-Haddon Hall, Atlantic City, N. J., October 1-3.

Pennsylvania Electric Association
Annual Meeting, Benjamin Franklin Hotel, Philadelphia, September 18-19; Joint Relay-Communications Committee Meeting, Emerson Hotel, Baltimore, Md., October 18-19.

Public Information Program
Annual Workshop Conference, Edgewater Beach Hotel, Chicago, September 20-21.

★**Wisconsin Utilities Association**
Accounting Section, Plankington Hotel, Milwaukee, Wis., September 20-21.

★**Public Utilities Association of the Virginias**
Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va., September 21-22.

American Society of Mechanical Engineers
Fall Meeting, Hotel Radisson, Minneapolis, Minn., September 25-28.

Iowa Utilities Association
Management Conference, Fort Des Moines Hotel, Des Moines, Iowa, October 1-2.

Southeastern Electric Exchange
Engineering-Operation Section Conference, John Marshall Hotel, Richmond, Va., October 4-5; Sales Conference, Roosevelt Hotel, New Orleans, La., October 31, November 1-2.

National Farm Electrification Conference
Annual Meeting, Hotel Gibson, Cincinnati, October 9-10.

Indiana Electric Association
Annual Convention, French Lick Springs Hotel, French Lick, Ind., October 10-12.

International Association of Electrical Leagues
Annual Conference, Roosevelt Hotel, New Orleans, October 10-13.

National Association of Railroad and Utilities Commissioners
Francis Marion Hotel, Charleston, S. C., October 16-19.

National Electronics Conference
Annual Conference, Edgewater Beach Hotel, Chicago, October 22-24.

American Standards Association
Annual Meeting, Waldorf-Astoria, New York, October 22-24.

★Addition this week.

YIELDS (%) — Operating Electric Utility Securities

	Bonds			Preferred Stocks			Common Stocks		
Quality	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE									
1951									
June 28	3.02	3.11	3.23	4.11	4.27	4.68	5.73	6.38	7.37
June 21	3.04	3.12	3.21	4.07	4.32	4.66	5.67	6.34	7.25
END OF QTR.									
1st 1951	2.87	2.93	3.00	3.96	4.19	4.52	5.47	6.20	7.13
4th 1950	2.65	2.67	2.78	3.86	4.14	4.51	5.80	6.54	7.44
3rd 1950	2.66	2.67	2.76	3.81	4.08	4.46	5.70	6.54	7.25
2nd 1950	2.68	2.66	2.74	3.79	4.03	4.38	5.38	6.51	7.50

Data: Reis & Chandler, Inc.

New England PS Files Plan for Its Dissolution

New England Public Service Co, Augusta, Maine, has filed a plan for the liquidation and dissolution of the company with the Securities and Exchange Commission. The company was ordered by SEC in 1941 to change its capitalization to one class of stock or to liquidate its affairs and distribute its assets to its security holders.

Assets of the company consist of 1,055,181 shares or 48.46% of the common stock of Central Maine Power Co, 231,668.5 shares or 35.46% of the common stock of Central Vermont Public Service Corp, and 493,856.8 shares or 52.36% of the common stock of Public Service Co of New Hampshire.

The plan, approved by the directors of the company June 23, provides that after all the company's obligations have been met 75% of its stocks be distributed to holders of Nepsco preferred stocks and the remainder to holders of the common. Chief among Nepsco's obligations is a bank loan of $1,490,000.

There are presently outstanding 48,411 shares of $7 preferred which is callable at 120 and has dividend arrears of $129.50 per share, 109,694 shares of $6 preferred callable at 110 with dividend arrears of $111 per share, and 961,361 shares of common stock.

•

Securities Proceeds Up

Estimated gross proceeds of new securities offered by electric, gas, and water utilities during the first quarter were $513 million, topping the first quarter, 1950, figure of $488 million. Total gross proceeds of offerings for the quarter, according to Securities and Exchange Commission estimates, were $1,864 million, compared with $1,526 million for the same period last year.

•

Tucson Utility Granted Franchise; Will Pay Tax

The Tucson (Ariz.) Gas, Electric Light & Power Co will pay a 2% gross tax on gas and electric business to the city and put the downtown electrical system underground under terms of a 25-year franchise.

The franchise was voted, 3,532 to 1,941, after a bitter municipal battle during which a Tucson newspaper publisher led a fight to impose a 3% tax.

The utility countered with full-page color advertisements in the publisher's paper in answer to his front-page editorials.

Immediately following the franchise victory, the utility authorized $433,447 for initial expansion of the system. The company has a $7-million expansion program under way, including construction of a 26,000-kw generating plant.

Under the tax provision, the utility agreed to pay a minimum of $5,000 a month to the city. The new tax will nearly double the utility's contribution to the city, the company estimates. Last year payments amounted to $74,765.

Stockholders to Be Asked Views on Dividend Policy

Texas Utilities Co, a holding company, is giving its stockholders a chance to decide whether they want increased dividends or whether they prefer to have earnings used to finance future construction.

In addition, Howard L. Aller, president of the utility has asked investment bankers to express their opinions on future dividend policy.

Texas Utilities has the lowest dividend rate of any utility holding company, with only 54% of its earnings being paid to stockholders as dividends. The quarterly rate is 32¢. Aller questioned whether the stockholders want to receive increased dividend payments, on which they would have to pay taxes, and later be asked to subscribe for additional common stock to finance the large expansion program planned by the system.

The three operating subsidiaries of Texas Utilities plan to spend $39 million for new construction in 1951 and $49 million in 1952.

FINANCIAL BRIEFS

Washington Water Power Co has received authorization from the Securities and Exchange Commission to borrow $26 million from banks up to June 15, 1954. The company proposes to use $7,150,000 of the loan to repay outstanding bank loans and the rest of the money for its construction program.

Dwellings owned by an electric cooperative and leased to employees for rent are subject to taxation the same as other dwellings, North Dakota's attorney general has ruled.

A rate increase of 10% has been granted Texas Electric Service Co by the Fort Worth city council.

Electric Utility Financing—June 23-30

Company	Description	Amount of Offering (000)	Offering Price	Yield at Price to Public
Bonds				
Cleveland Electric Illuminating	1st mtg, 3⅛%, 1986 new money	$25,000	102.39%	3.26%
Appalachian Electric Power	1st mtg, 3¼%, 1981 new money	17,000	102.25	3.63
Montana-Dakota Utilities	1st mtg, Serial 4.50, 1952-1971 new money	3,000	103.24219	4.12
Common Stock				
United Utilities, Inc	199,451 sh new money	2,344	$11.75	8.51

IN THE INDUSTRY

Service Rushed to Pump Water

Connection by Pacific Gas & Electric Co of an avalanche of agricultural loads brought on by threat of a fifth dry year in California's San Joaquin Valley is an outstanding example of how well a utility can rise to meet an emergency situation.

By calling on all 90 construction crews of the division, including those in outlying areas, and suspending all maintenance work, the division was able to connect without delay every pump that was ready for service. The crews connected an average of one installation every fifteen minutes for every working hour of every one of the 30 days in April.

The unprecedented demand for service began when it was announced that run-off of the rivers supplying the valley area would be only 25% to 55% of normal. Farmers began to prepare for a water shortage, deepening present wells, increasing pump sizes, and installing new wells to replace wells which had failed or were likely to fail. Applications for agricultural service skyrocketed to approximately 1,500, compared to a normal 200 or 300.

Since announcement of the imminent water shortage came at the exact time many growers were preparing to pre-irrigate their lands for cotton planting, the demand was for immediate service so that lands could be planted and potential crops realized.

H. H. Courtright, manager of the San Joaquin division, called a meeting of district managers and department heads to lay out a program to meet the demand. After asking them to outline the size and scope of the problem, he told them:

"Since 85% of the income of the valley comes from agriculture, we want no farmer to lose his crop because of our failure to get service to him in time, nor do we want any business to face reduced income because of any crop failure."

The 90 crews, including those from outlying areas, were set up on assembly-line basis. Special crews hauled poles, dug holes and set the poles. Others strung conductors and set transformers.

The program was started April 1, and by May 1 every agricultural pump ready for service had been connected. As a result, not one acre of San Joaquin Valley land that was ready failed to receive irrigation.

An interesting sequel to this is that as soon as the Bureau of Reclamation's Central Valley Project goes into action this year PG&E is going to lose a considerable part of this pumping load.

• • •

BPA Considering Steam Plants

Like TVA the Bonneville Power Administration is turning to steam. BPA's excuse is fish. The fishing interests have blocked construction of the proposed Cowlitz and Pelton Projects. In addition Congress has been frowning on big hydro projects. So BPA is now considering erecting steam plants in the vicinity of Coos Bay, Ore., and Longview and Bremerton, Wash. These plants would help out on the system fringes where line losses are heaviest. Output of the plants would also firm up the power supply for industries now operating on interruptible contracts. It is figured that credits against the steam costs would run from 0.5 to 1 mill because of present line losses and transmission system costs.

Talk is that the plants would be $15-million, 100,000-kw jobs. Oil would be used as fuel, but some BPA men hope that they could be converted to natural gas if this fuel is brought to the area.

While BPA officials believe it has authority to oversee construction, it would not object to the Army Engineers or the Reclamation Bureau building the plants. But so far no bill has been introduced in Congress calling for anybody to build them. But there is a rumor that such a bill is being drafted.

TECHNICAL NOTES

ARCHER E. KNOWLTON

Bomb-breaching of the Mohne dam through a 76 x 28 meter gap let out 116 of the 140 million cubic meters stored.

Analog computers promise to solve the "model" configuration of economic problems as handily as they do the equally mathematical electrical circuits.

Residential electric heating on a 10% saturation basis would equal nearly half the present total residential load.

Hotline tools can be handled with greater dexterity with bare hands; a warning is also afforded if brush discharge is experienced.

Peak capacity can be gained for short periods by removing one or more extraction heaters from service; it may obviate starting an additional unit.

Saturable reactors are all potentially magnetic amplifiers.

Investment in the most expensive of 984 U. S. hydroelectric generating stations ranges from 4 times the least expensive for very small plants to 2.4 times for the largest.

Corrosion of galvanized hardware promises to be deferred advantageously by coating with appropriate petroleum wax, the color of which will identify the longer-life potentiality.

Peat and brown coal were used in gas producers for diesels in Denmark when oil supplies failed.

Semi-conductors depend for their degree of conductivity upon impurities within the crystal lattice.

Peripheral velocity of the tip of a 23-inch exhaust blade on a 65½ inch pitch circle of a 3600-rpm turbine at 60 cycles is nearly 960 miles per hour.

Luminescence of crystals appears to be dependent on electrons trapped in so-called "F centers."

Stump treatment with sprayed 2, 4-D in oil gave 95% prevention of regrowth in a Canadian test area.

NEWS ABOUT PEOPLE

Ohio Utility Appoints Miller Vice President

Harry M. Miller, a former member of the Ohio Public Utilities Commission, has been elected a vice president

H. M. MILLER

of Columbus & Southern Ohio Electric Co.

Miller was appointed to the utilities commission in 1941 and served as its president from 1947 to 1949. He resigned as commissioner several months ago. Last year he served as president of the National Association of Railroad and Utilities Commissioners.

•

Harry L. Erlicher has retired as vice president of General Electric Co to become special assistant to Under Secretary of the Army Archibald S. Alexander. A part-time consultant on procurement matters for the Under Secretary since January, 1950, he will be in charge of Army procurement and production expediting. Erlicher joined GE as a messenger boy and rapidly moved up in the company. He became assistant purchasing agent in 1923 and general purchasing agent in 1931. Nine years later he was made vice president in charge of purchasing and traffic.

E. K. Thorgaard, St. Cloud division manager for Northern States Power Co, has been appointed manager of the company's Minneapolis division, a newly created post. Replacing him at St. Cloud is **L. K. McLeland.** Thorgaard joined the company in 1923 as an electrician's helper and later became management representative at Glenwood, Minn., and division manager in 1945. McLeland, who has been sales engineer in the company's municipal department in Minneapolis, started with Northern States in 1924.

•

Donald I. Bohn Awarded 1950 Lamme Gold Medal

(*See Front Cover*)

Donald I. Bohn, chief electrical engineer of Aluminum Co of America, has been awarded the 1950 Benjamin G. Lamme Gold Medal. The presentation was made at the recent summer general meeting of the American Institute of Electrical Engineers.

He received the medal for his work in developing a high-speed circuit breaker for use with mercury arc rectifiers.

Bohn joined Alcoa in 1923 and previously had worked for General Electric Co. He became electrical superintendent at the company's Badin (N. C.) Works and later went to Pittsburgh as assistant chief engineer. In 1946 he was named chief engineer.

During World War II, Bohn was a consultant in the design of eight aluminum smelting plants built by Alcoa.

•

Otto J. Zweibel, electric distribution engineer for Connecticut Light & Power Co, has been appointed general engineer of the company. The duties of distribution superintendent will be taken over by **Russell Hickock,** transmission superintendent. Hickock also will direct general construction work on the system.

Leo F. Brown has been appointed works manager of the Ambridge, Pa., plant of National Electric Products Corp. Previously he worked for General Electric Co as plant manager of the air conditioning division at the Bloomfield (N. J.) Works.

E. S. Loane Elected VP by Pennsylvania W & P

Pennsylvania Water & Power Co has elected E. S. Loane a vice president. He has been assistant to the executive vice president.

Loane joined the utility in 1930 as

E. S. LOANE

a draftsman. Later he became assistant to the general superintendent. As assistant to the executive vice president he conducted special studies for the company on construction, operating economies, and matters pertaining to rates.

•

Lauren W. Grayson has been appointed general manager and chief engineer of the Glendale, (Calif.) Public Service Department. He had held a similar position in the city of Riverside.

Willis M. Johnson, supervising appraisal engineer for Appalachian Electric Power Co, has joined the staff of American Gas & Electric Service Corp in New York. In his new position, Johnson will assist R. C. Miller who handles electrical construction for the AG&ES system.

Carl O. Carlson, superintendent of electric operations of Atlantic City (N. J.) Electric Co, has been appointed assistant vice president in charge of operations. He joined the Atlantic

(*Continued on page* 27)

GET THIS SENSATIONAL NEW BOOK ON...

COLOR and LIGHTING

A valuable, non-technical treatise prepared by Sylvania in conjunction with leading color analysts

Here is one of the most complete and fascinating books on color and lighting ever printed.

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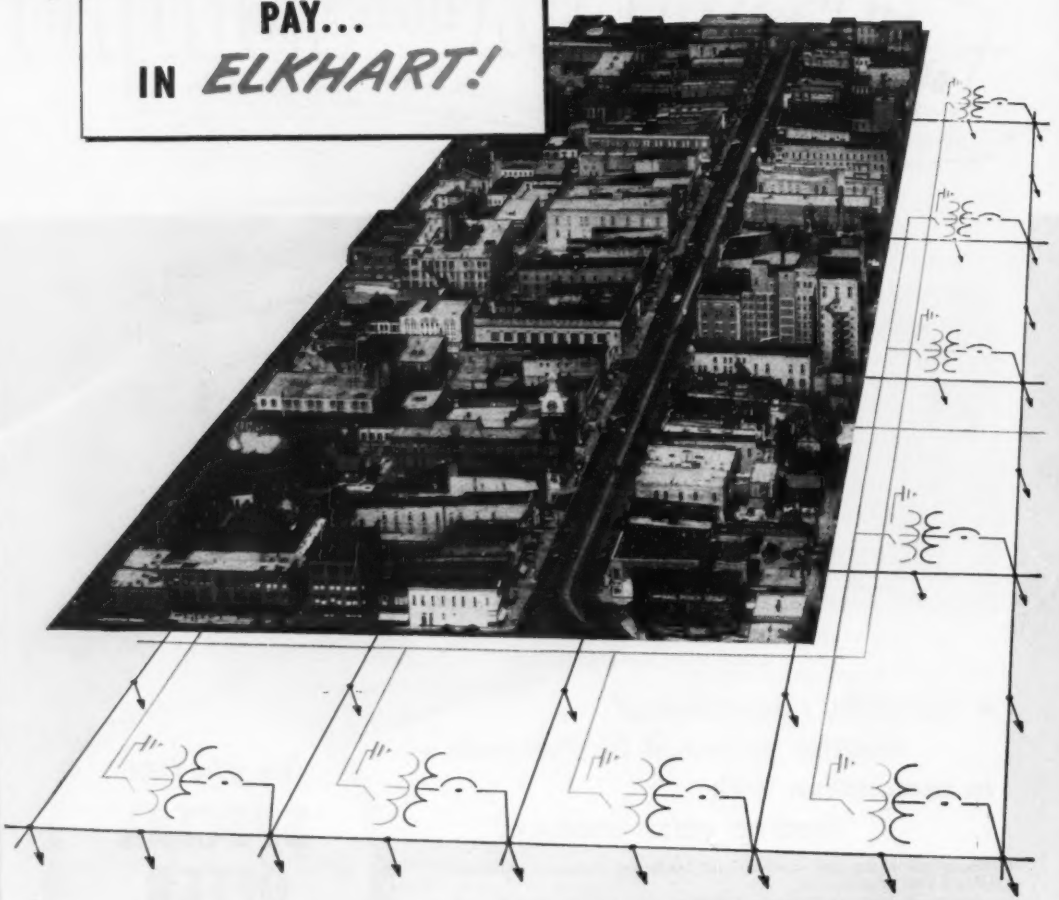
SYLVANIA ELECTRIC PRODUCTS INC. 1901-1951 FIVE DECADES OF PROGRESS 50th ANNIVERSARY

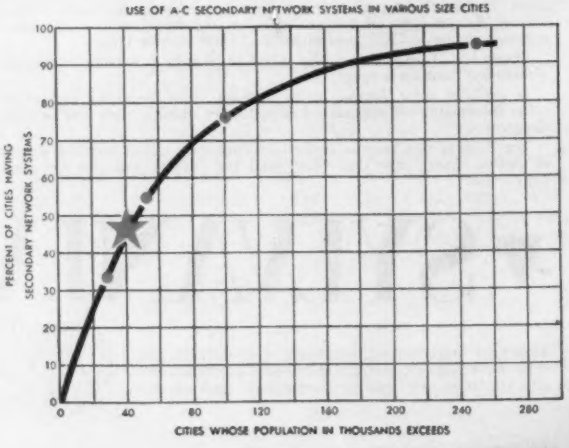
NETWORK SYSTEMS PAY... IN *ELKHART!*



FACTS ABOUT ELKHART'S A-C SECONDARY NETWORK SYSTEM.

The secondary network system is supplied from 13 vaults having a total capacity of 3,900 kva. The area covered by Elkhart's network is almost 20 square blocks, containing 3.61 miles of conduit, 5.47 miles of primaries and 2.27 miles of secondary feeders.

One third of all cities in the United States with a population of 25,000 or more have network systems, while one half of all cities with a population of 50,000 or more have network systems.



17 years' uninterrupted service... no voltage-regulation problems

There's no power service problem in the business district of this bustling Indiana town of 40,000 . . . they took care of that 17 years ago. Then, Elkhart was struggling with an overloaded radial system, consisting of 3-phase primaries and both 3-phase and single-phase secondaries . . . tranformers were mounted on practically every pole. The Fire Department and fire underwriters were concerned . . . the utility was plagued with voltage-regulation problems.

OVER AND UNDER . . . In 1934 the Indiana and Michigan Electric Company met the problems of Elkhart's business district by installing an *A-C Secondary Network System.* Transformers and primaries were placed underground . . . the secondaries and services overhead. This overhead and underground combination, particularly applicable to smaller cities and towns, made possible great economy in the original installation cost.

IMPROVED SERVICE . . . The A-C Secondary Network System has resulted in a high standard of continuity of service and uniformly good voltage-regulation, not attainable through radial distribution systems. Underground placement of the primaries and transformers has greatly reduced congestion and improved appearance.

ABOUT MAINTENANCE . . . Maintenance story here is typical of all users of secondary networks . . . it's low, almost negligible. The utility reports that in 17 years of operation, there has never been a complete interruption of the system. Underground crews like the convenience of maintaining the system. They know . . . they work with the equipment.

CUSTOMERS AND UTILITIES BENEFIT . . . Utility customers appreciate the high-quality service and uniformly good voltage-regulation afforded by network service. The utility benefits from reduced operating and maintenance expense and improved customer good will. Large or small, your town can have high-quality network service . . . at a cost commensurate with the benefits this service affords. Westinghouse makes this equipment and can help in your planning. Call or write: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-97155

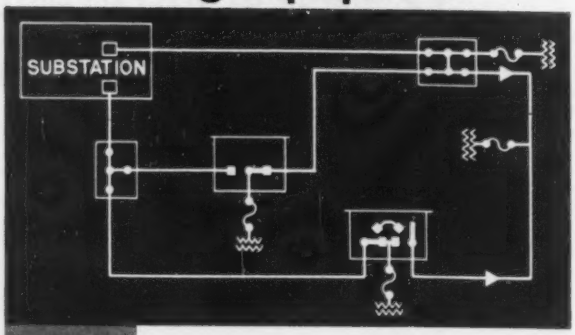
YOU CAN BE SURE.. IF IT'S
Westinghouse
NETWORK EQUIPMENT

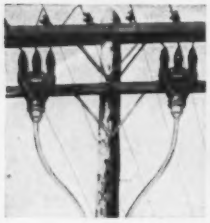
For FLEXIBILITY in UNDERGROUND SYSTEMS
Use G&W Sectionalizing Equipment

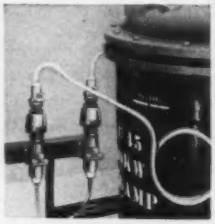
As the trend in electrical distribution has turned toward the use of underground cable systems, G & W Electric Specialty Co. has pioneered in the design of devices for terminating, connecting, fusing, and switching cables.

At the right is a composite diagram of a cable system showing how G & W equipment provides system flexibility with minimum expense for equipment.

When you are designing a primary cable system, consult G & W or the G & W engineering representative near you. Let us show you how disconnecting potheads, oil fuse cutouts, cable boxes, and oil switches can help you obtain maximum efficiency at minimum cost.

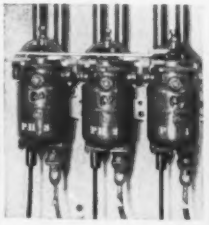






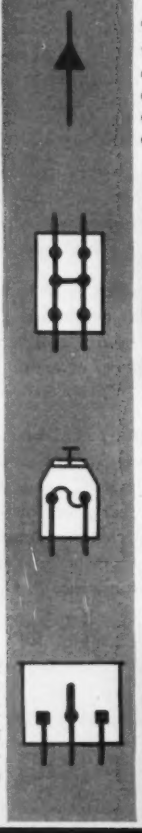
CABLE CONNECTION BOXES

Air or oil filled boxes with links or fuses are widely used for sectionalizing underground cables. Where operation is infrequent and time of operation is not important, G & W cable boxes are the most economical means of interconnecting feeders and isolating equipment.



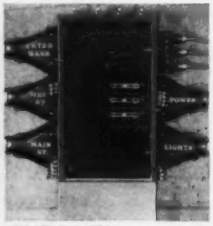
LOAD BREAK OIL SWITCHES

Where rapid, safe sectionalization of feeders and isolation of equipment is required, G & W load break oil switches are installed. 7500, 15,000, and 23,000 volt switches are made in any switching arrangement necessary to meet individual requirements. Type "RA" load break oil switches provide maximum system flexibility in any installation.



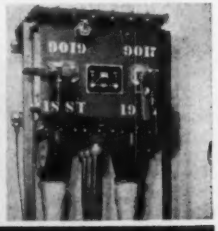
DISCONNECTING POTHEADS

These hermetically sealed cable terminations provide a convenient and economical means for disconnecting cables from overhead wires or isolating equipment from feeders. Plug and socket porcelain enclosed disconnects provide non-load break disconnection up to 7500 volts.



OIL FUSE CUTOUTS

Actually load break oil switches enclosed in a common steel housing with oil immersed fuses, oil fuse cutouts are used for fusing and switching primary circuits in subway, vault, and overhead installations. Within the limits of their short circuit interrupting capacity, 2500, 5000, and 8000 volt units can often be used where more expensive protection equipment would otherwise be required.



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Representatives in principal cities. In Canada, Powerlite Devices, Ltd., Toronto

News About People

(*Continued from page* 22)

City firm in 1926 after working for West Penn Power Co and the former Public Service of New Jersey. With Atlantic City Electric Carlson served as distribution engineer, superintendent of distribution, and superintendent of transmission and distribution.

W. N. Farquhar has been named manager of Aluminum Co of America's new plant at Wenatchee, Wash. He has been a member of the company's electrical engineering department in Pittsburgh and will make his headquarters there temporarily. He served as project engineer for the Wenatchee smelting plant.

Dr E. H. Schultz has been named manager of the newly created physics and electrical engineering division of the Armour Research Foundation of Illinois Institute of Technology. He had been chairman of the electrical engineering department and acting chairman of the physics department. Succeeding Schultz as chairman of the electrical engineering department is **Harvey J. Finison. Virgil H. Disney, James L. Murphy,** and **Raymond E. Zenner** have been appointed assistant chairmen of the department.

Leonard J. Linde has been appointed assistant general manager and chief engineer of the Boston Works of Allis-Chalmers Manufacturing Co. The company named **Henry P. Pinkham** assistant chief engineer, and **John F. Chipman** product engineer. Linde was a consulting engineer for Allis-Chalmers prior to his new appointment and formerly worked for A. B. Chance Co and General Electric Co.

E. B. Ripley, superintendent of the Devon Station of Connecticut Light & Power Co, has been made mechanical engineer in the company's recently organized engineering department. **Hollis N. Hugins,** assistant plant engineer at Devon since 1939, has replaced Ripley as superintendent. Ripley joined the company in 1926 as assistant engineer in the operating department at Waterbury and became production engineer in 1929. He was appointed superintendent at Devon in 1939.

Mock Named Washington Correspondent for EW

Jesse Mock now is reporting the news in the nation's capital for "Electrical World." He succeeds Ronald D. Ross who recently became associate editor of "Public Power Magazine."

A native of North Carolina, Mock

JESSE MOCK

has been covering Washington for the past four years as a correspondent for a number of out-of-town newspapers. He is a graduate of the University of North Carolina.

•

Harold V. Bozell, former editor of "Electrical World," has retired as president of General Telephone Corp. He will continue to serve the company in a consulting capacity. He had been president of General Telephone for the last 11 years. Before becoming editor of "Electrical World" Bozell taught electrical engineering at the University of Oklahoma and Yale University.

Daniel F. Villa, superintendent of electric transmission and distribution in the Humboldt Division of Pacific Gas & Electric Co, has been appointed division manager. He has been superintendent since 1942.

James A. Bauble has resigned as director of the public relations department of Westinghouse Electric Corp to join the staff of the assistant to the president of Chrysler Corp, Detroit.

Dr. K. S. Pitzer has resigned as director of research for the Atomic Energy Commission to become dean of the University of California's College of Chemistry.

S. W. Elberson, vice president and general manager of Gulf Public Service Co, Lafayette, La., has retired. Joining the utility in 1927 as general superintendent, Elberson later was made chief engineer. In 1943 he became vice president and general manager.

George D. Conant has retired as commercial manager of Tide Water Power Co, Wilmington, N. C. He has been with Tide Water for 12 years and previously worked for Florida Public Service Co. Conant's duties have been taken over by R. P. Andrews, vice president of the company.

OBITUARY

Louis E. Underwood, 73, retired manager of General Electric Co's Pittsfield plant, died July 1 at his summer home in Wilmington, N. Y. He joined the company at the Lynn plant in 1897 and in 1927 was appointed managing engineer of the motors department at Lynn. Underwood became manager of the Pittsfield plant in 1932. He retired from the company in 1945.

J. Harry Gross, 67, manager of Nepcoduct sales for National Electric Products Corp, died recently. He joined the firm in 1928 serving in the Baltimore office. Later he headed divisional sales units at Philadelphia, Washington, D. C., and Detroit. In 1939 Gross was transferred to the home office at Pittsburgh.

John G. Mooney, 33, sales representative for General Electric Co in the Philadelphia area, died at Cortland, N. Y., June 29. He had represented GE in central New York and was transferred recently.

William F. Detwiler, Jr, 38, assistant treasurer of Central Cable Corp, Jersey Shore, Pa., died June 21. He had served the company since its formation in 1939 except for a short interval before and during the war.

Walter Frank Davids, a retired engineer who operated the first electric plant in New Rochelle, N. Y., died in that city June 24.

Aaron Catzen, 80, president of the Flat Top Power Co, died June 18 in Bluefield, W. Va.

MANUFACTURERS and MARKETS

Metal Firms to Boost Production of Aluminum

The "second round" of the primary aluminum expansion program is now underway. The government has authorized the Reynolds Metal Co and the Kaiser Aluminum & Metals Corp to increase their aluminum production by 40 million lb each.

Certificates of necessity, with five-year amortization privileges, have been granted Reynolds for its Longview, Wash., plant and Kaiser for its Mead plant at Spokane.

Reynolds plans to enlarge and improve its facilities at the Longview plant. The plant has three potlines with an annual capacity of 60 million lb.

Kaiser will add an eighth potline at its Mead plant. Operating on a 24-hour basis, the plant now is turning out 280 million lb of pig aluminum a year.

Both companies hope to have the additional capacity just authorized in operation by the end of next year.

A certificate of necessity also has been granted Kaiser for expansion of its Trentwood plant, which produces aluminum alloy ingots. The $1,158,-700 expansion program will permit the rolling mill to increase its production 25%.

•

GE Plans Expansion of Electronic Facilities

General Electric Co will triple the size of its Electronics Laboratory building at Electronics Park, Syracuse, N. Y., headquarters of its Electronics Department, by adding two wings. The enlarged building will have a total of 101,000 sq ft of floor space.

When the expansion program is completed the laboratory will increase its personnel from 162 to 335. The additional facilities and personnel will enable the company to devote more effort to research and development work on military electronic equipment.

GE recently broke ground for a $15-million electronics plant at New Hartford, outside of Utica, N. Y. The new plant, which will have 338,000 sq ft of floor space, will be operated by the Electronics Department.

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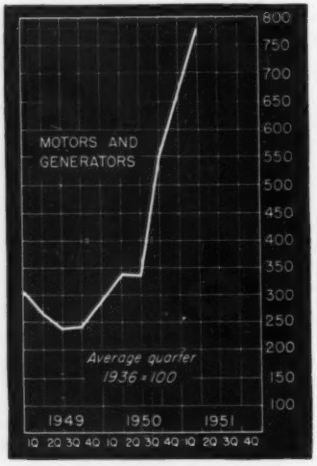
Motor, Generator Orders Continue to Skyrocket

Orders received for motors and generators continued to skyrocket in the first quarter of 1951.

The index compiled by the National Electrical Manufacturers Association rose to 780 in the first quarter. This



represents a gain of 16% above the 1950 fourth quarter figure of 674.

This year's first quarter index was 130% above the figure for the same period in 1950.

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Offers Consumer Booklet

Westinghouse Electric Corp's Better Homes Bureau has prepared a booklet for electric utilities to enable them to assist consumers planning to build or remodel their homes. Entitled "Electrical Living and How to Have It," it contains detailed plans, wiring diagrams, novel lighting effects, and appliance installation data.

MANUFACTURING BRIEFS

An 183-ton, 25,000-kw turbogenerator, believed to be the largest piece of machinery ever shipped across the ocean directly to Cleveland, arrived last month on a Norwegian steamer. The unit, to be installed in the Cleveland municipal lighting plant, was sent from Brown Boveri Ltd, Baden, Switzerland. A similar unit sent earlier was shipped by boat to New York and then by rail to Cleveland.

World production of tin rose slightly in April according to the latest available figures published by the International Tin Study Group. World mine production in April totaled 14,-500 long tons, compared with 14,200 tons in March. The rise was attributed to an increase in Bolivian exports from 2,097 tons in March to 3,452 tons in April. Production decreased in April in Malaya, Indonesia, and the Belgian Congo.

Leeds & Northrup Co, Philadelphia, has moved its Houston office to 2480 Times Boulevard, Houston 5, Tex. The new office provides 50% more space than the old one located at 1314 Texas Ave.

International Cross Arm Co, Inc, is installing wood preservative treatment facilities at its Bellingham, Wash., plant. Plans include a steam plant, two 22,000-gal tanks for handling hot and cold liquids, a large underground surge tank and a 52-ft long pressure retort, making possible the production of 2,500 treated cross arms a day.

General Electric Co's Lamp Department will discontinue the manufacture and sale of fluorescent sign tubing Aug. 31.

Westinghouse Electric Corp's Steam Division at South Philadelphia will build a 185,000-kw tandem compound steam turbine, largest single shaft 3,600-rpm turbine ever to be built.

The unit, ordered by Public Service Electric & Gas Co of New Jersey, will have 25-in. blades. It will operate with steam at an initial pressure of 2350 psi and 1100° F, with reheat to 1050° F, and will be a triple exhaust unit.

Sangamo Electric Co has granted a 3¢ hourly cost-of-living pay increase to its employees. Workers have received cost-of-living raises based on rises in the consumers price index, totaling 13¢ since last summer.

SALES ASSIGNMENTS

COMPANY STAFFS

General Electric Co has appointed eight district managers for traffic appliance sales. They are E. F. Vickery, Northeastern district, with headquarters at Boston; R. A. Buescher, Atlanta district, Philadelphia; E. T. Carvill, Southeastern district, Atlanta; P. W. Conrad, Great Lakes district, Cleveland; D. H. Edwards, North Central district, Chicago; W. L. Rasmussen, Central district, Kansas City; H. H. Mount, Southwestern district, Dallas; and J. P. Evans, Pacific district, San Francisco.

Phelps Dodge Copper Products Corp has added Frank A. Stevens, Jr, to its sales staff. He will operate out of the Boston office and will concentrate on sales and service to public utilities in New England.

Westinghouse Electric Corp has named Walter T. Baker, Jr, Pacific Coast district manager of the Westinghouse Electric Appliance Division, San Francisco. He replaces J. J. Moffatt who has resigned. Baker formerly was manager of the Northwestern district. New appliance manager of the Northwestern district, Chicago, is H. R. Bryant. Chester W. Paulson was named district appliance sales promotion manager to replace Bryant.

REPRESENTATIVES

Buchanan Electrical Products Corp, Hillside, N. J., has appointed John R. Schmidt, 621 Foreland St, Pittsburgh 12, Pa, as its western Pennsylvania-West Virginia representative.

Standard Transformer Co, Warren, Ohio, has appointed Carl A. Froebel Co as its representative for eastern Missouri and southern Illinois to handle the company's complete line of transformers for distribution, power, metering, testing, and street lighting.

Metal Prices

July 2, 1951

COPPER, Conn. V, lb	$ .24½
LEAD, N. Y., lb	.17
ZINC, prime Western, E. St. Louis, lb	.17½
TIN, Straits, qual. N. Y., lb	1.06
ALUMINUM, ingot, base price	.19
NICKEL, base price	.39½
STEEL billets, Pitts., ton	56.00
STEEL, scrap, No. 1 heavy, Pitts., ton	45.00

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Alabama—Covington Electric Co-operative, Andalusia, 100 mi. rural distr. lines and sys. imprvs., Covington Co. $290,000.

California—Mountain Empire Electric Co-operative, Campo, 36 mi. rural distr. line, 28 mi. transmission line, sub-stations and sys. imprvs., San Diego Co. $405,000.

California—Bureau Reclamation, Dpt. Interior, Bldg. 1-A, Denver Federal Center, Denver, Colo. 3 transformers for Folsom Power Plant, Central Valley Proj., Spec. DS-3399.

Calif., Inyokern—Constr. Officer, Bldg. 981, Naval Ordnance Test Station, Inyokern, electric distr. and regulator sys., Ballistic Ground Ranges, Spec. 30040. Plans deposit $15. Navy-test bldgs. and facilities, transmitter tower, transmitter bldg., range operation bldg., ordnance breakdown bldg., range storage bldg. No. 2, Spec. 30041. Plans deposit $150.

Idaho—Bureau Reclamation, Dpt. Interior Bldg. 1-A, Denver Federal Center, Denver, Colo., furnishing, del. f.o.b. cars shipping point or f.o.b. cars Mountain Home, switchgear assemblies and equipment, etc., for Anderson Ranch Power Plant, Boise Proj. Spec. DS-3473. L. N. McClellan, ch. engr.

Iowa—Sac County Electrical Co-operative, Inc., Sac City, Ia., constr. 31.93 mi. rural distr. lines, Sac Co. Brown Eng. Co., KP Bldg., Des Moines, consult. engr.

Kentucky — Southern Kentucky Rural Electric Co-operative Corp., Somerset, 305 mi. rural distr. line and sys. imprvs., Wayne Co. $840,000.

Minn., Duluth—U. S. Eng., 1609 Jackson St., Omaha, Neb., airfield lighting and power distribution, Duluth Air Force Base, Inv. 51-(S.P.).

Missouri—Consolidated Electric Co-operative, Mexico, addnl. rural distr. lines, extensions, sys. imprvs. $391,000.

Montana—Big Flat Electric Co-operative, Turner, 295,000 mi. electrical distr. line and sys. imprvs., Blaine Co. $850,000.

Neb., Sidney—City, municipal electric sys., incl. buildings, power equip., wiring, lighting, etc. $508,260. Fulton & Cramer, 922 Trust Bldg., Lincoln, engrs.

N. J., Jersey City—Bd. City Comrs., City Hall, extension and imprvs. to Rockaway Valley Sewage Treatment Plant. Contr. 1, general construction; Contr. 1E, electrical work; Contr. 1H, heating and ventilating; Contr. 1P, plumbing. Plans deposit $50. Havens & Emerson, Woolworth Bldg., 233 Broadway, New York, N. Y., engrs.

N. J., Trenton—Westinghouse Electric Supply Co., 745 East State St., assembly plant, Olden Ave. Extension. $185,000.

N. M., Los Alamos—U. S. Atomic Energy Comn., Los Alamos, Proj. "L", TA-3, 240x600 ft. mono. concrete and concrete block exterior, technical shop, Inv. No. 291-52-3. $2,250,000-$3,000,000.

N. Y., Hicksville—Amperex Electronic Corp., 25 Washington St., Brooklyn, Zone 1, plans by Frank S. Parker & Assoc., 256 E. 49 St., New York, 17, N. Y., mfg. plant on 7 acre tract on Duffy Ave. $1,000,000.

Oregon—Central Electric Co-operative, Redmond, Ore., labor for constructing 65 mi. rural distr. lines, Deschutes Co. Plans deposit $10. Robert Welty, Box 283, The Dalles, engr.

Oregon—Bonneville Power Admin., 827 N. E. Oregon St., Portland, Springfield sub-station, Inv. 5901. Plans deposit $25.

Pa., Phila.—Dpt. City Transit City Hall Annex, completion Locust St. Subway, $1,984,979, Howard S. Hipwell, c/o owner, ch. engr.

Texas—Concho Valley Electric Co-operative, Inc., Carroll Land, mgr., San Angelo, 236 mi. rural distr. lines, 37 mi. conversion existing lines. (Tex 114—M. Tom Green) Tom Green Co. $299,000. Freese & Nichols, 407 Danciger Bldg., Fort Worth, consult. engrs.

Washington—Bonneville Power Admin., 827 N. E. Oregon St., Portland, Ore. constr. Franklin Sub-station, Inv. 5922. Plans deposit $25 installing static capacitors at Olympia sub-station Inv. 5903. L. C. Stewart, 827 N. E. Oregon St., Portland, Ore., engr.

Washington — Bureau Indian Affairs, Swan Island, Portland, Ore. 23 miles wood pole transmission line, Wapato Project, Yakima Co.

Wash., Everett—S. Eng., 4735 E. Marginal Way, Seattle 4, Wash., electrical installation for ground control approach facility, Paine Field, Serial No. ENG 45-108-51-201.

Wis., Fennimore—City, City Hall, power plant addn. Mead & Hunt, Inc., 550 State St., Madison, engr.

Wis., Watertown—Perfex Corp., 500 W. Oklahoma Ave., Milwaukee, Zone 7, 100,000 sq. ft. factory bldgs. and power plant.

Wash., Wenatchee—Chelan Co. Public Utility Dist., c/o Stone & Webster Eng. Corp., engrs., 49 Federal St., Boston, Mass., 70,600 ft. rigid zinc-coated steel conduit for expansion of Rock Island Damp Power Plant.

Alta., Medicine Hat—Calgary Power Co. Ltd., Calgary, steam power plant, $3,000,000.

Alta., Edmonton—D. W. Laird, engr. Defence Constr. Ltd., 400 Kensington Bldg., Winnipeg, Man., design, fabrication, installation 2 steam generating units at Namao Park. Approx. $90,000. Plans deposit $50.

N. S., Greenwood—P. J. Mangan, engr., c/o Defence Constr. Co. Ltd., 1032 Gottingen St., Halifax, N. S., design, supply, erecting 4 bit. burning steam generating units. Approx. $175,000. Plans deposit $50.

Ont., Ottawa—S. M. Connolly, engr. Defence Constr. Ltd., 441 Queens' Quay W., Toronto 2B, bit. coal burning steam generating units (4), at Uplands Airport, Job 1330, Approx. $175,000. Plans deposit $50.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Ariz., Phoenix—General Motors Corp., General Motors Bldg., Detroit, Mich., shops, offices, laboratories, on 2280 acre proving ground, roads, 5 mile circular banked track, near here. $6,000,000.

Kan., Wichita—Bd. Educ., 428 S. Broadway, West High School. $3,250,000. Thomas & Harris, 321 W. 2 St., archts.

Ky., Covington—Roman Catholic Diocese of Covington, Covington, hospital. $1,500,000.

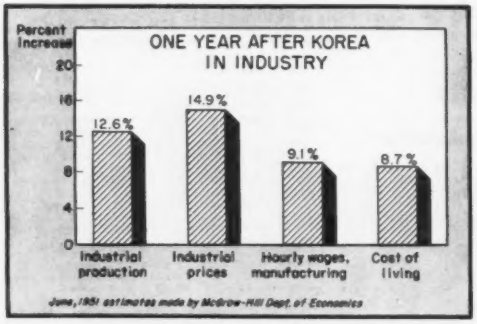
Ky., Fort Knox—Dpt. Army, The Pentagon, Wash., D. C., permanent bldgs., and installations incl. barracks, 500 bed hospital, administrative bldg., chapels, warehouses, post exchanges, mess halls, firing ranges, $40,746,100.

Mich., Detroit—Veterans Admin., Vermont Ave. between H and I Sts., N.W. Wash., 25, D. C. 500-bed, brick, steel, concrete veterans hospital, 7 Mile Rd. and Lahser St. $9,800,000.

Mich., Lansing—State, A. N. Languis, dir. State Bldg. Dpt., 3 story, brick, steel, concrete state office bldg., W. Michigan Ave. $5,000,000. Extended date. Smith-Hinchman & Grylls, Inc., 800 Marquette Bldg., Detroit, archt.

N. Y., New York—Yeshiva University, Amsterdam Ave. and 187 St., Zone 33, plans by Isadore Rosenfield, 23 W. 47 St., Zone 19, medical center, incl. 12 bldgs. and basic science bldg., library administration, laboratories, auditorium, students residence, school of dentistry, school of nursing, nurses residence, utilities bldg., general hospital, Eastchester Rd. and Seminole Ave. $25,000,000.

Electrical Business Outlook



KOREA brought sharp rises in production and prices. The indices today have leveled off or are climbing only slowly

Business, Post-Korea

What will an end to the fighting in Korea mean for the U. S. business outlook?

A glance at the record of what's happened since Korea will help fill in the prospect of what's ahead. The key indicators on general business show U. S. industrial production is up 12.6%.

Prices, too, gained spectacularly after Korea and then leveled off. Industrial prices—all wholesale prices other than farm and food prices—are up almost 15%.

Hourly wages in manufacturing have gone up 9.1% on the average. And the cost-of-living has gained 8.7%. Utilities show similar gains.

The anniversary of Korea finds power output running 12.2% higher than a year ago. Prices—except for coal—of key materials utilities buy are up more than 10%. Utility pay scales show practically the same gain as wage rates in manufacturing industries.

Peace and Prices

A truce in Korea will have an immediate impact on prices. Commodity prices—tin, rubber, and wool—are highly sensitive to changes in the international outlook.

But—with the contracts out and plants tooling up—the U. S.'s military production program will go ahead.

And business' program of capital expenditures is at a record high level. The SEC-Commerce survey shows that purchases of new plant and equipment lagged in the first quarter. Business just couldn't get projects moving as rapidly as it had expected to.

In the second quarter, though, investment in new facilities jumped 25%—to a total of $6.4 billion for the three months. And it promises to stay close to that level in the third and fourth quarters.

With these two great driving forces behind it, industrial production promises to gain steadily. As plants get into production on military products, the Federal Reserve Index of Production may well go to 230 this fall.

As production goes up in industry, power demand will gain. The prospect is that the industry will continue to push its output up.

The Price Outlook

While sensitive prices will jump around with the war news, it's likely that these price changes will have little impact on the average of wholesale prices.

The world price for copper, for example, may drop. But prices in other countries have been far above the U. S.'s ceiling price. So it's not likely that utilities will see much of a drop in metal prices.

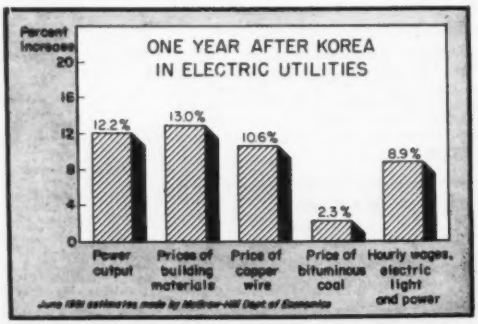
With residential building dropping off, prices of some building materials may come down. Lumber, which has already seen price setbacks, may ease some more, for example. But the prices of materials important in utility construction—steel and cement, for example—are likely to be stable.

Wages, however, will go higher. Congress began to balk at tightening up on controls months ago. And the Wage Stabilization Board has a huge backlog of applications for increases that it still has to pass on. So the outlook again is for higher labor costs.

The cost of living—consumer prices have been level since April—may ease off in the next few months; and many buyers, feeling that the pressure is off in Korea, may postpone some of the purchases they had been planning.

A general peace settlement with the Russians would change the whole business outlook. The thought of that now scares some traders in stocks and commodities.

But few people expect the Russians to reverse their whole expansionist policy. So—while peace negotiations will add confusion to the international and business outlook—the prospects are still for high production and employment.



UTILITIES since Korea have pushed production up 12.2%; have seen key prices shoot upward 10% or more in one year

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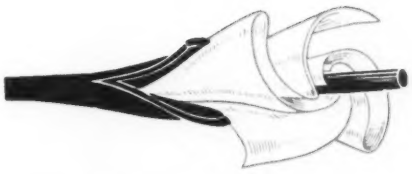

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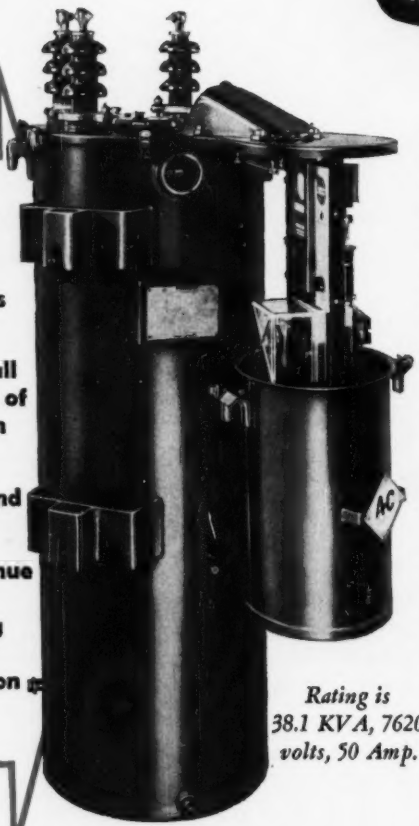

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Provides Full 20% Range of Regulation

± 1 Volt Band

Raises Revenue by Increasing KWH Consumption

Rating is 38.1 KVA, 7620 volts, 50 Amp.

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The new 50 amp JFR regulator is fully automatic. It regulates line voltage through a range of 20% in 32 small 5/8% steps, and holds ± 1 volt band. Rating is 38.1 kva, 7620 volts, 50 amps for operation at 7960, 7200, 6900, 5000, 4330 and 2500 volts.

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